

**REMARKS**

Claims 13-19 and 26-39, and 41-60 are pending. Claims 13, 37, 59, and 60 are in independent form. Reconsideration and withdrawal of the present rejection is respectfully requested.

Applicant thanks the Examiner for the courtesy of a telephone interview granted to applicant's representative on February 7, 2008, at which time the rejections of claims 13, 37, 59, and 60 under 35 U.S.C. § 102(b) were discussed. In particular, the meaning of the term "events" and the relevance of "events" in the context of continuous monitoring of heart rate in U.S. Patent No. 5,524,631 to Zahorian et al. (hereinafter "Zahorian") were discussed.

As discussed, applicant believes that those of ordinary skill, when armed with the specification and the recitation in claims 13, 37, 59, and 60 that events comprise periods in time when an information content of the cardiac biological signal is of *increased* relevance to a particular purpose, would be able to discern that periods of time that are not of increased relevance to the particular purpose also necessarily exist.

Nevertheless, to advance prosecution, claims 13, 37, 59, and 60 have been amended to recite that events are demarcated by periods of time that are not of increased relevance to the particular purpose. Examples of such demarcations are presented in FIG. 3 of the specification and the written description thereof.

Zahorian neither describes nor suggests that a cardiac biological signal that includes information describing such events is received, or that a merit of *the information* in the cardiac biological signal describing such events is determined, as recited in claims 13, 37, 59, and 60. Instead, Zahorian describes the continuous monitoring of heart rates and a determination of the merit of the different non-linear filters that are applied to a heart rate signal.

Accordingly, claims 13, 37, 59, and 60 are not anticipated by Zahorian. Applicant respectfully requests that the rejections of claims 13, 37, 59, 60 under 35 U.S.C. § 102(b) over Zahorian, and the claims dependent therefrom, be withdrawn.

***Rejections under 35 U.S.C. § 103***

Claims 13 and 37 were rejected under 35 U.S.C. § 103(a) as anticipated by U.S. Patent Publication No. 2002/0137994 to Baker (hereinafter “Baker”) and Zahorian.

The rejections of claims 13 and 37 are based on the contention that it would have been obvious for one of ordinary skill to have combined Anderson and Zahorian and arrive at the recited subject matter. Applicant respectfully disagrees.

As discussed above, Zahorian continuously monitors heart rates and determines the merit of different non-linear filters that are applied to a heart rate signal. Zahorian does not involve events that comprise periods in time when an information content of the cardiac biological signal is of increased relevance to a particular purpose and that are demarcated by periods of time that are not of increased relevance to the particular purpose. Zahorian thus neither describes nor suggests that a cardiac biological signal that includes information describing events is received, or that a merit of the information in the cardiac biological signal describing events is determined, as recited in claims 13 and 37. Zahorian also neither describes nor suggests transmitting information describing a first proper subset of such events or discarding information describing a second proper subset of such events.

Baker does not remedy these deficiencies in Zahorian. In this regard, Baker describes that continuously monitored pulse oximetry data can be used to calculate various parameters. *See, e.g., Baker, FIG. 1A, para. [0054].* For example, an adaptive comb filter can be used to track slowly varying heart rates. *See, e.g., Baker, paras. [0036], [0054].* As another example, pattern matching techniques can be used to calculate heart rates in cases of arrhythmia or suddenly changing heart rates. *Id.* A best rate algorithm 42 then arbitrates between the results of the adaptive comb filter and the pattern matching algorithm using confidence levels associated with each and a pulse rate is output on a display. *See, e.g., Baker, para. [0057].* In addition to a pulse rate, saturation can also be calculated in parallel by a saturation calculator 50. *See, e.g., Baker, FIG. 1A, para. [0054].*

Baker thus not only continuously monitors the various parameters, Baker also arbitrates between *processing techniques*. Baker thus neither describes nor suggests that a cardiac biological signal that includes information describing events is received, or that a merit of the information in the cardiac biological signal describing events is determined, wherein *the events comprise periods in time when an information content of the cardiac biological signal is of increased relevance to a particular purpose and the events are demarcated by periods of time that are not of increased relevance to the particular purpose*, as recited in claims 13 and 37. Baker also fails to describe nor suggest transmitting information describing a first proper subset of such events or discarding information describing a second proper subset of such events. Indeed, given that Baker relates to *continuous* monitoring, applicant respectfully submits that it is clear that information describing a subset of events is never discarded in Baker.

Accordingly, claims 13 and 37 are not obvious over Baker and Zahorian. Applicant respectfully requests that the rejections of claims 13, 37, and the claims dependent therefrom, be withdrawn.

Claims 13 and 37 were rejected under 35 U.S.C. § 103(a) as anticipated by U.S. Patent No. 4,336,810 to Anderson et al. (hereinafter “Anderson”) and Zahorian.

The rejections of claims 13 and 37 are based on the contention that it would have been obvious for one of ordinary skill to have combined Anderson and Zahorian and arrive at the recited subject matter. Applicant respectfully disagrees.

As discussed above, Zahorian continuously monitors heart rates and determines the merit of different non-linear filters that are applied to a heart rate signal. Zahorian does not involve events that comprise periods in time when an information content of the cardiac biological signal is of increased relevance to a particular purpose and that are demarcated by periods of time that are not of increased relevance to the particular purpose. Zahorian thus neither describes nor suggests that a cardiac biological signal that includes information describing events is received, or that a merit of the information in the cardiac biological signal describing events is determined, as recited in claims 13 and 37. Zahorian also neither describes nor suggests transmitting information describing a first proper subset of such events or discarding information describing a second proper subset of such events.

The rejections of claims 13 and 37 point to Anderson's comparison between a recording of a raw signal and known templates of events as constituting a determination of a merit of the information in the cardiac biological signal describing events. *See Office action mailed October 26, 2007, page 6, para. 18.* Applicant respectfully disagrees. Such comparisons between a raw

signal and known templates of events merely serve to identify events. The comparisons do not determine a merit of the information in a cardiac biological signal describing the events, as recited in claims 13 and 37.

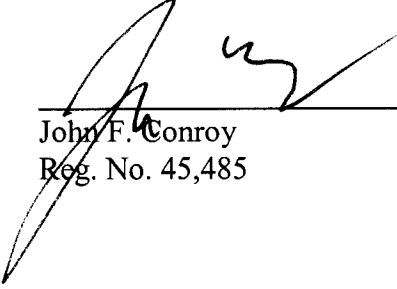
The rejections of claims 13 and 37 also point to Anderson's discard of information that does not match such templates as the discard of information describing a proper subset of such events. *See Office action mailed October 26, 2007, page 7, first complete sentence.* However, such information, in failing to match a template, is not an event that comprises a period in time when an information content of the cardiac biological signal is of *increased relevance* to a particular purpose and that is demarcated by periods of time that are not of increased relevance to the particular purpose. Instead, the information that fails to match a template is understood to come from a period of time that is not of increased relevance to the particular purpose and is hence not an event.

Accordingly, claims 13 and 37 are not obvious over Anderson and Zahorian. Applicant respectfully requests that the rejections of claims 13, 37, and the claims dependent therefrom, be withdrawn.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Applicant hereby petitions that the period for response be extended by one month, up to and including February 26, 2007. Please charge the fee for Request for Continued Examination, the fee for a one month extension of time, and any other charges or credits, to deposit account 06-1050.

Respectfully submitted,



John F. Conroy  
Reg. No. 45,485

Date: February 26, 2008

Fish & Richardson P.C.  
12390 El Camino Real  
San Diego, California 92130  
Telephone: (858) 678-5070  
Facsimile: (858) 678-5099

JFC/jhg  
10813544.doc